PATENT USSN 10/087,473 Docket 090/003c

REMARKS

The amendments and the remarks below are responsive to the Office Action dated December 17, 2004, which is the second non-final action on the merits of the application.

Claims 1-2, 4-11, 13-15, 17-18, and 23-29 were previously pending in the application and under examination. Following entry of this amendment, claims 7-8, 13-15, and 23-28 are cancelled, certain claims are amended, and claims 30-32 are newly added. Accordingly, claims 1-2, 4-6, 9-11, 17-18, and 29-32 are pending and under examination.

Further consideration and allowance of the application is respectfully requested.

Interview summary:

The undersigned expresses his appreciation to Examiner Thái-An N. Ton and Examiner Joseph Woitach for an interview of this case and several other cases at the Patent Office on March 2, 2005.

In view of the various cell types covered by the claims and the restriction requirement, the undersigned agreed to focus the use of the direct differentiation method of this invention for the purpose of making dopaminergic neurons. The Examiners invited the undersigned also to indicate in the claim the particular factor present in the medium that promoted differentiation into dopaminergic neurons. These recommendations have been adopted in this Amendment.

Response to Office Action:

Entry of the claim amendments does not introduce new matter into the disclosure. Illustration of the use of the direct differentiation method to make dopaminergic neurons, and the importance of TGF-β Superfamily Antagonists in this process, is shown at various places in the application, such as Figure 4, page 11 lines 32-37, and Example 5 (page 33 ff.) of the specification as filed, and claims 11 and 18 as previously presented. Coverage includes equivalents of the new limitations not previously recited in the base claims.

Applicant is grateful to the Examiner for withdrawing rejections under 35 USC § 112 ¶ 2 and for obviousness-type double patenting.

The amendments to the claims are believed to address all remaining issues in the application. The double patenting with respect to USSN 09/994,440 no longer holds, since the 09/994,440 application does not teach the making of dopaminergic neurons. Rejection under the written

PATENT USSN 10/087,473 Docket 090/003c

description and enablement requirements of 35 USC \S 112 \P 1 no longer hold, since the claims require only 2% TH positive neurons, not 75% homogeneity.

The proportion of neural cell markers present in the neural cell populations made according to the claimed invention is quite significant: The proportion of cells in fetal brains that express tyrosine hydroxylase is only about 1%, as measured in samples consisting mostly of neural cells — yet fetal brain tissue has been found to be therapeutic when administered to patients having Parkinson's disease (associated with dopamine transmission deficiency).

Thus, the application complies with all the requirements of § $112 \, \P \, 1$.

Request for further Interview

Applicant respectfully requests that all outstanding rejections be reconsidered and withdrawn. The application is believed to be in condition for allowance, and a prompt Notice of Allowance is requested.

In the event that the Examiner determines that there are other matters to be addressed, applicant hereby requests an interview by telephone.

PATENT USSN 10/087,473 Docket 090/003c

Fees Due

No fee is required with respect to the amendments to the claims, because there are only fourteen claims, of which two are independent.

Enclosed with this Amendment is authorization to charge the Deposit Account for the one month extension of time.

Should the Patent Office determine that a further extension of time or any other relief is required for further consideration of this application, applicant hereby petitions for such relief, and authorizes the Commissioner to charge the cost of such petitions and other fees due in connection with the filing of these papers to Deposit Account No. 07-1139, referencing the docket number indicated above.

Respectfully submitted,

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April 18, 2005



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Facsimile Transmittal Sheet

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USSN 10/087,473

LAST PAGE